General

PalmLUX™ range of lighting controls was designed with both user and installer in mind. All PalmLUX™ devices are fitted with on-board DIL switches, that facilitate simple installation and commissioning. There is no need for software tools or proprietary configuration devices. Anyone can fully configure basic PalmLUX™ system with only terminal screw driver and product user manual.

```
┌─────────────────────────┐
│   3 SIMPLE STEP         │
│   PalmLUX SETUP         │
└─────────────────────────┘
            │
            ▼
    ╱─────────────────────────────╲
   │  SYSTEM FULLY WIRED           │
   │  BY QUALIFIED ELECTRICIAN     │
    ╲─────────────────────────────╱
            │
            ▼
┌─────────────────────────┐
│   TURN SYSTEM           │
│   POWER OFF             │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────────────┐
│  (1)  SET ACTUATOR (DIMMER)     │
│       CHANNEL ADDRESSES         │
└─────────────────────────────────┘
            │
            ▼
┌─────────────────────────────────┐
│  (2)  SET ACTUATOR (DIMMER) ZONE│
│       ADDRESSES (OPTIONAL**)    │
└─────────────────────────────────┘
            │
            ▼
┌─────────────────────────────────┐
│  (3)  SET KEYPAD ZONE           │
│       ADDRESSES (OPTIONAL**)    │
└─────────────────────────────────┘
            │
            ▼
┌─────────────────────────────────┐
│  TURN SYSTEM POWER ON           │
│  Wait System Boot Up Complete   │
└─────────────────────────────────┘
            │
            ▼
    ╱─────────────────────────────╲
   │      SYSTEM READY             │
    ╲─────────────────────────────╱
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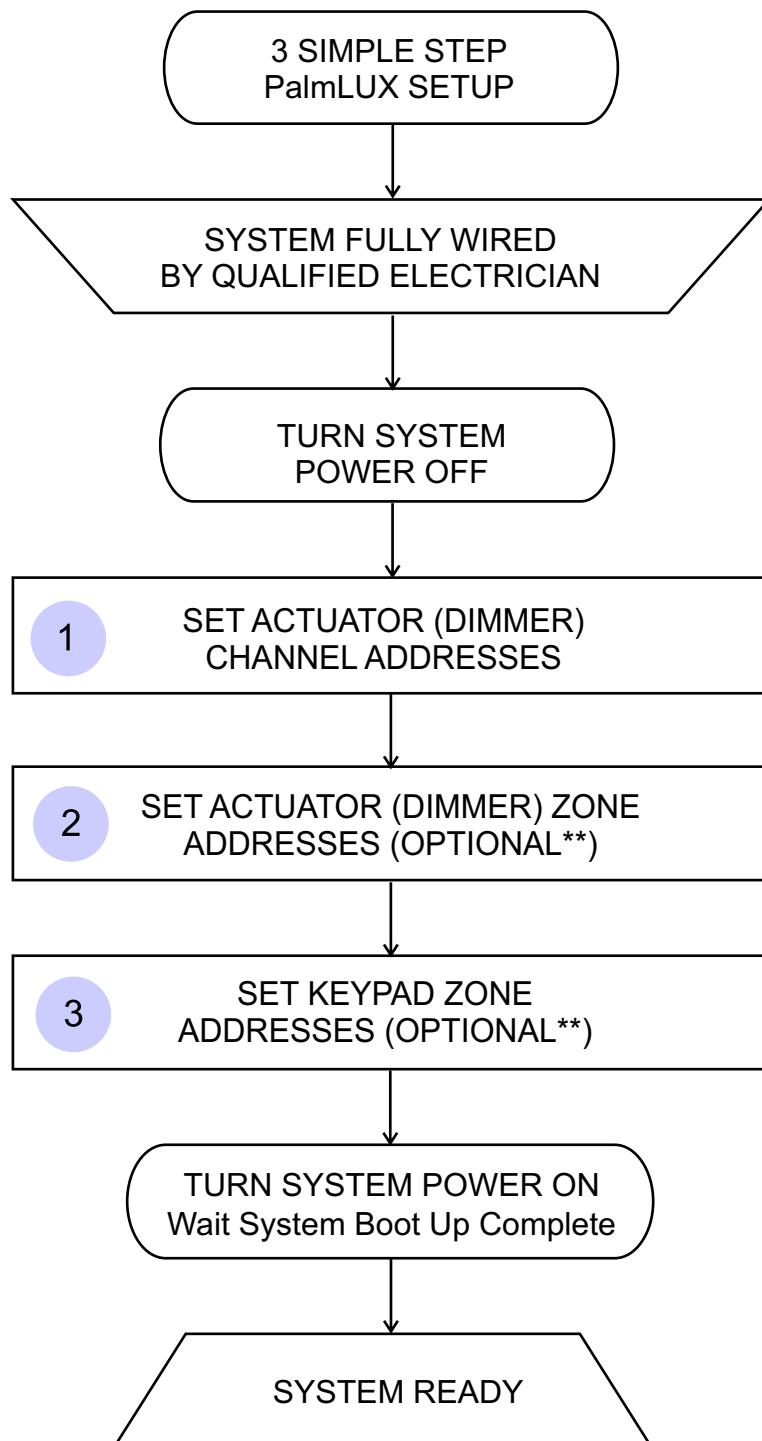
Before PalmLUX™ system can be used, all actuators (dimmers, relays, etc.) have to be given unique channel addresses. Once channel address has been set, each actuator will operate in "broadcast mode". The same is true for all keypads, which are as factory default configured to send commands in "broadcast". This way each keypad will control all devices on PalmLUX™ network.

Therefore, to get system up and running, the only pre-requisit is to set actuator channel addresses. The system can then be used in broadcast unit detailed commissioning is carried out.

AN257 Application NOTE Doc.AN257-01
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PAGE 01

STEP 01 - Set Actuator Channel Addresses

First step would be to configure actuator channel addresses. Under actuators, we consider dimmers, relays, blind motor controllers, projector screen controllers, 1-10V ballast controllers, DSI ballast controllers, LED drivers and other devices designed to control some type of load.

All channel addresses on *PalmLUX*™ network must be unique and can be set via on-board address DIL switch. Each device user guide contains address table indicating settings required to assign a device channel address. The settings are the same throughout the range. When adjusting DIL switches, device power must be safely OFF. Also ensure that all switches are fully engaged.

Channel DIL switch can be found on each device at the bottom of the unit, once terminal guide is removed. Please refer to the diagram bellow where D502 dimmer is shown. For details on DIL switch locations please refer to particular device documentation.

PalmLUX™ device feature "Address Conflict Resolution Algorithm" that can be used to check for existence of duplicated channel addresses. This algorithm is instigated by the device with channel address 1 after power up. In case there is no address 1 in the system, the algorithm will not be active. The feature can also be disabled via *PalmLUX*™ palm computer utility. For details on "Address Conflict Resolution Algorithm" please refer to AN258 application note.

Lift terminal guard to access DIL switches and terminals

Right-hand DIL Switch: Zone 6-Way
Left-hand DIL Switch: Address 4-Way

Power Terminal Block

Status LED

Temperature LED

N-L-D

PHASELINER PalmLUX

D502

Status
Temp

500W PalmLUX
A-So-B Digital Dimmer

Data (DALI) Terminal Block

ZONE DIL Switch

Channel Address DIL Switch
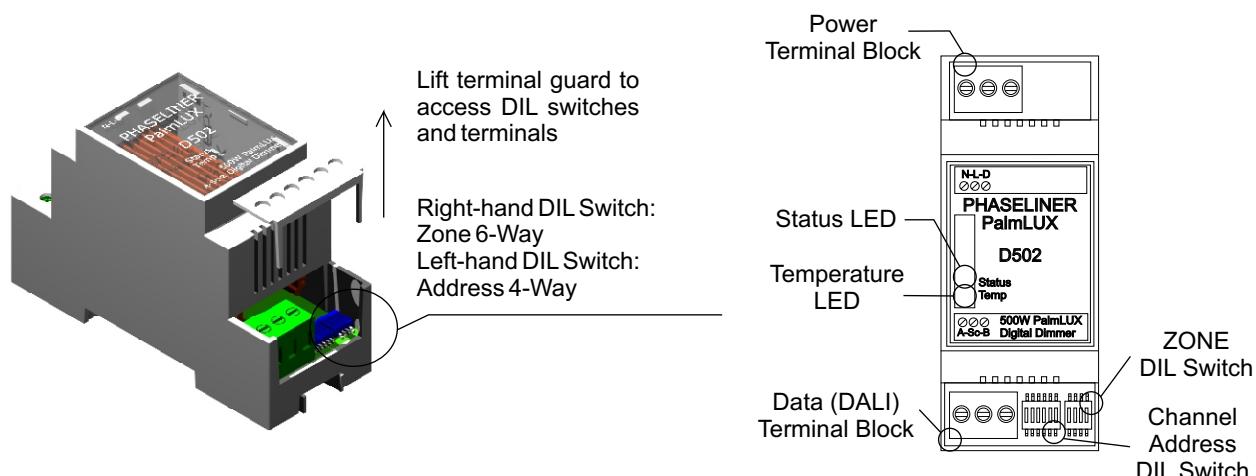
DIL Setting						Address
1	0	0	0	0	0	1
0	1	0	0	0	0	2
0	0	1	0	0	0	3
0	0	0	1	0	0	4
0	0	0	0	1	0	5
0	0	0	0	0	1	6
0	0	0	0	0	0	7
0	0	0	0	1	1	8
0	0	0	1	0	1	9
0	0	1	0	0	1	10
0	1	0	0	0	1	11
1	0	0	0	0	1	12
0	0	1	1	0	0	13
0	0	1	1	0	0	14
0	0	1	1	1	0	15
0	0	1	1	1	1	16
0	0	0	1	1	1	17
0	0	1	0	1	0	18
0	1	0	0	1	0	19
0	1	0	0	1	1	20
0	1	0	1	0	0	21

DIL Setting						Address
0	1	0	1	0	1	22
0	1	0	1	1	0	23
0	1	0	1	1	1	24
0	1	1	0	0	0	25
0	1	1	0	0	1	26
0	1	1	0	1	0	27
0	1	1	0	1	1	28
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1	0	0	1	1	1	40
1	0	1	0	0	0	41
1	0	1	0	0	1	42

DIL Setting						Address
1	0	1	0	1	0	43
1	0	1	0	1	1	44
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1	1	1	1	0	1	62
1	1	1	1	1	0	63
1	1	1	1	1	1	64

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STEP 02 - Set Actuator ZONE Addresses

Second step would be to set actuator zone addresses, in the same manner as for the channel address, but with the difference that these now can be repeated. Devices can also keep the default setting, "broadcast".

Devices can also be members of several zones at the same time. There are three pre-program settings that will cater for most projects, as listed: 1-2, 1-2-3, 3-4, 2-3-4 and 1-2-10. For detailed settings, please consult device user guide.

Full flexibility of 16 zones in any combination is available via *PalmLUX*™ configuration utility for palm computer. For details please consult *PalmLUX*™ documentation.

|				
DIL : 0000 BROADCAST	DIL: 0001 ZONE: 04	DIL: 0101 ZONE: 08	DIL: 0011 ZONE: 1+2+3
DIL: 1000 ZONE: 01	DIL: 1100 ZONE: 05	DIL: 1101 ZONE: 09	DIL: 1011 ZONE: 3+4
DIL: 0100 ZONE: 02	DIL: 1010 ZONE: 06	DIL: 0110 ZONE: 10	DIL: 0111 ZONE: 3+4+5
DIL: 0010 ZONE: 03	DIL: 1001 ZONE: 07	DIL : 1110 ZONE: 1+2	DIL: 1111 ZONE: 1+2+10
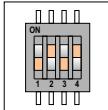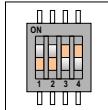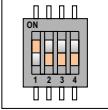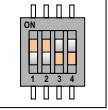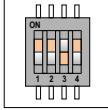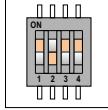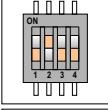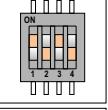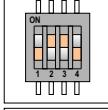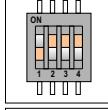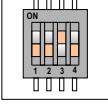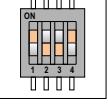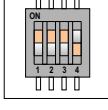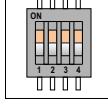
STEP 03 - Set Keypad Zone Assignments

Last thing to do would be to assign keypads to zones. This is done by setting zone address switches on wall keypads. Each *PalmLUX*™ keypad is fitted with zone DIL switch. Here user can select zones 1-10. Further 6 zones are programmable via *PalmLUX*™ utility. In addition to 10 zones, user can also select two unique settings called "Entrance DOOR" which allows all lights in the house to be turned on-off from the entrance door, plus "Top of stairs" setting that allows all lights "downstairs" to be turned off from the "top-of-stairs" switch.

Remove cover plate to gain access to DIL switches using 4mm screwdriver.

Locate plate removal notch at the bottom rear edge of the cover plate.

ZONE DIL Switch

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DIL Setting	Configuration
DIL : 0000 BROADCAST (ALL DEVICES) LED Tell-back: broadcast	
DIL: 1000 ZONE: 01 LED Tell-back: Zone 01	
DIL: 0100 ZONE: 02 LED Tell-back: Zone 02	
DIL: 0010 ZONE: 03 LED Tell-back: Zone 03	
DIL: 0001 ZONE: 04 LED Tell-back: Zone 04	
DIL: 1100 ZONE: 05 LED Tell-back: Zone 05	
DIL: 1010 ZONE: 06 LED Tell-back: Zone 06	
DIL: 1001 ZONE: 07 LED Tell-back: Zone 07	
DIL: 0101 ZONE: 08 LED Tell-back: Zone 08	
DIL: 1101 ZONE: 09 LED Tell-back: Zone 09	
DIL: 0110 ZONE: 10 LED Tell-back: Zone 10	
DIL : 1110 ZONE: 11 LED Tell-back: Zones 1/2/3	
DIL: 0011 ZONE: 11 LED Tell-back: Zones 1/2/3/4	
DIL: 1011 ZONE: 11 LED Tell-back: Zones 1/2/3/4/5	
DIL Switch SETTING: 0111 Top of Stairs Config	
DIL Switch SETTING: 1111 Entrance Door Config: Emulates ALL ON & ALL OFF	
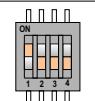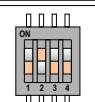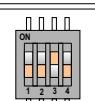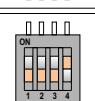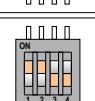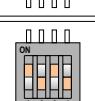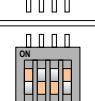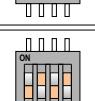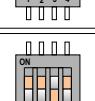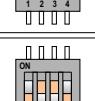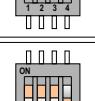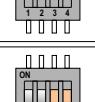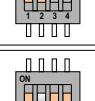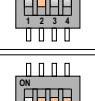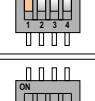
KEYPAD ZONE SETTING DIL SWITCH

The DIL switch is situated at the bottom of the PCB, accessible from the front of the unit once cover plate is removed. Use suitable flat blade screwdriver or similar tool to adjust the DIL setting. The adjustment must be carried out with care, as even thought the DIL switch is designed for this operation, excessive force may irreversibly damage the switch and the unit.

DIL switch setting affects keypad globally, i.e. all switches will accept the same zone. In case separate zone assignments are required for different buttons, the feature is available via *PalmLUX*™ programming utility.

ENTRANCE DOOR SETTING

This setting provides convenient way of introducing ALL OFF and ALL ON functions at the entrance door, or elsewhere in the property. It is achievable without a need for a programming tool, by simply setting the DIL switch to position 1111. The ALL ON function is actually recall scene 16, hence, it can be used as any global scene, for instance as security scene, turning on a single lighting circuit at low in each zone of the property. The buttons assignments are as follows:

Button 01: Trigger Scene 09 Zone 10
Button 02: Trigger Scene 10 Zone 10
Button 03: Trigger Scene 11 Zone 10
Button 04: Trigger Scene 12 Zone 10
Button 05: Trigger Scene 13 Zone 10
Button 06: Trigger Scene 14 Zone 10
Button 07: Trigger Scene 16 Broadcast
Button 08: Trigger OFF with FADE Broadcast

TOP OF STAIRS SETTING

This setting is designed for top of stairs locations where occupants so often have need to turn off all lighting downstairs, without having to attend to individual zone keypads. By programming scene 14 to zero at all actuators (dimmers) operating at the ground level and setting the top of stairs keypad to 1110, the "ground floor OFF" function will become available. Note: in order not to affect lighting level elsewhere all other dimmer should have the scene 14 at "ignore" (factory default).

Button 01: Trigger Scene 01 Zone 10
Button 02: Trigger Scene 02 Zone 10
Button 03: Trigger Scene 03 Zone 10
Button 04: Trigger Scene 04 Zone 10
Button 05: Trigger Scene 05 Zone 10
Button 06: Trigger Scene 06 Zone 10
Button 07: Trigger Scene 07 Zone 10
Button 08: Trigger Scene 14 Broadcast

LED TELL-BACK

The button LEDs illuminate each time the command assigned to that button and belonging to the same zone appears on the bus. This commands can be triggered on the actual keypad or any other keypad on the network.

On certain DIL switch setting the LED tell-back over-lapping is enabled, see settings 1110/0011/1011. These setting enable listening groups, i.e. LED being illuminated following the appearance of the relevant command originated from a several different zones.

NOTE: *PalmLUX*™ lighting network supports up to 16 zones. Addressing keypads to zones 11-16 is only available via *PalmLUX*™ programming utility.

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